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Items for discussion and decision: open data

Open data

Report of the Secretary-General

Summary

The present report, which was prepared in accordance with Economic and Social Council decision 2017/228 and past practices, details work undertaken on open data for the Sustainable Development Goals, including the outcomes of the international seminar on open data for the Sustainable Development Goals, held in the Republic of Korea in September 2017, and a review of country initiatives on open data platforms. The report highlights recommendations on open data principles for national statistical offices. The Commission is invited to consider the points for discussion contained in section VI of the report.

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I. Introduction

1. The 2030 Agenda for Sustainable Development and the global indicator framework have expanded the scope and breadth of data needs from the whole statistical system and helped to promote the engagement of a wider range of data producers and users.

2. The main framework for responding to the data needs of the 2030 Agenda is provided by the Cape Town Global Action Plan for Sustainable Development Data, adopted by the Commission at its forty-eighth session and endorsed by the General Assembly in its resolution 71/313. As part of its six strategic actions, the Cape Town Global Action Plan underscores the importance of open data and includes specific actions to strengthen open data initiatives under the strategic area of innovation and modernization of national statistical systems. In particular, the Global Action Plan calls for: (a) exploring ways of revising the Fundamental Principles of Official Statistics to include relevant and appropriate aspects of open data initiatives; (b) clarifying and supporting the role of the national statistical systems in open data initiatives, consistent with the Fundamental Principles of Official Statistics; and (c) encouraging national statistical offices to embrace the open data initiative and ensure that stakeholders of the national statistical system are part of the process.

3. In its decision 48/102 (see E/2017/24-E/CN.3/2017/35), the Statistical Commission welcomed the conclusions of the seminar on open data, on the theme "Adding value by matching access with privacy and security", held in New York on 3 March 2017, and noted that as open data initiatives are explicitly referenced in the Cape Town Global Action Plan and can play a critical role in supporting the implementation of the 2030 Agenda for Sustainable Development, agreed to include an item on open data in the provisional agenda of its forty-ninth session. Groups working on big data, fundamental principles and quality frameworks were encouraged to take relevant aspects of open data into account in their respective work programmes.

II. Experiences with open data

A. Outcomes of the "Friday seminar on emerging issues" on the theme "Open data: adding value by matching access with privacy and security" (3 March 2017)

4. The seminar on the theme "Open data: adding value by matching access with privacy and security", held on 3 March 2017, prior to the forty-eighth session of the Commission, included a rich discussion among a diverse group of participants, with presentations from countries including Canada, Mexico, New Zealand, the Philippines, the United Kingdom of Great Britain and Northern Ireland and the United Republic of Tanzania, highlighting the value of open data and the progress made in implementing open data in national statistical offices.[1] Representatives of international organizations and the private sector also shared their experiences with open data, both as producers and users of data. The seminar stressed the importance

[1] For more information, see https://unstats.un.org/unsd/statcom/48th-session/side-events/20170303-1M-friday-seminar-on-emerging-issues/.

of four pillars in implementing open data, namely: partnership; technology; legislation and institution setting; and capacity-building and resource mobilization.

B. Outcomes of the international seminar on open data for the Sustainable Development Goals (Seoul, 25–27 September 2017)

5. The international seminar on open data for the Sustainable Development Goals, hosted by Statistics Korea (KOSTAT), was held in Seoul from 25 to 27 September 2017. The seminar was organized by the Statistics Division of the Department of Economic and Social Affairs of the Secretariat and KOSTAT. The seminar contributed to the ongoing dialogue on the importance of open data initiatives in support of the implementation of the 2030 Agenda and drew upon the Friday seminar on emerging issues on the theme "Open data: adding value by matching access with privacy and security", held on 3 March 2017, prior to the forty-eighth session of the Commission. The main objective of the international seminar was to review and recommend solutions and best practices for making data more open and accessible, by addressing the practical question of how to make data more open in the context of national statistical systems. The seminar was also an opportunity to review experiences in countries in relation to the implementation of open data practices and the work undertaken by some of the international partners.

6. In the context of the seminar, "open data" was defined as data that are of high quality, are well documented, respect data privacy concerns, are free and are easily accessible and usable.

7. The discussion focused on addressing some of the challenges faced by the national statistical systems in adapting to open data and promoting the use of open data. The main topics of the seminar included: (a) open data initiatives in support of the 2030 Agenda and the Sustainable Development Goal indicators; (b) supporting the role of national statistical systems in open data initiatives and encouraging national statistical offices to embrace the open data initiative; (c) balancing openness with security and privacy; (d) ensuring stakeholder involvement in open data processes; (e) improving data sharing through data interoperability; and (f) coordinating capacity-building efforts towards open data initiatives.

8. The seminar identified challenges that need to be addressed in the implementation of open data by national statistical systems. These include establishing the necessary infrastructure, in particular managing the integration of multiple portals, to allow for data to be presented and disseminated. Countries also reported an urgent need for capacity-building and training for the development of new skills needed to implement open data initiatives.

9. Adequate funding and budgeting also represent a serious challenge for many statistical offices, as there are multiple areas of work competing for limited resources. Another issue raised during the discussion was the importance of finding a balance between issues of privacy and confidentiality and openness. As "open data" goes across the Government, there can also be difficulties in ensuring adherence by other government agencies to the requirements of open data. Communication and dialogue, including outreach to engage all stakeholders in the process, are an important aspect in being able to implement open data practices. Finally, in some countries, there is an urgent need to revise the laws or legal frameworks to allow for necessary provisions to be included to ensure that data are open and accessible.

10. The international seminar also made specific suggestions related to the work of the global statistical and data systems (see sect. V for more details on the recommendations).

11. Some country examples that highlight the success stories of open data include the following:

(a) New Zealand reported on its open government data programme. A key component of the success of open data in New Zealand has been building and maintaining trust and creating a fundamental shift in how openness and open data are viewed. There has been a change in the role of the national statistical office to support the use and reuse of data, and its efforts have led to an increase in access to data through application programming interfaces and led to innovative applications on its website. In order to balance privacy and openness, privacy has been used as a guiding principle, leading to appropriate access to data while still embracing the value of open data;

(b) The Philippines developed an open data platform called "OpenSTAT" that allows the Philippine Statistics Authority (PSA) to share data under an open data licence. The open data licence allows data to be freely used, reused and redistributed without restrictions other than proper citation. OpenSTAT combines over 900 data sets. Through OpenSTAT, PSA has adopted a policy of openness for all data sets to be created, collected, processed and disseminated in adherence to the general principles of the global movement on open government data;

(c) In Mexico, the National Institute of Statistics and Geography (INEGI) established a specialized technical committee on open data. The goals are to promote the availability of open data and the dissemination, use, reuse and exchange of public statistical and geographical information and to develop and review guidelines, technical standards and best practices.

C. Experience of the Statistics Division with open data for the Sustainable Development Goals

12. The Statistics Division is working with Member States and other partners to develop web applications for improved reporting and communication of Sustainable Development Goal indicators, in particular to provide open access to data and metadata on the Goals for global monitoring. As part of this effort, the Division is conducting an assessment of its web-based data dissemination portals, with a view to adopting best practices in open data in its regular data dissemination programmes and activities. In addition, a recently launched global Sustainable Development Goal indicators application programming interface provides programmatic access to the global indicators database using the OpenAPI specification.[2]

D. Open data in national reporting platforms

13. Within the context of the implementation of a project on supporting countries in the monitoring and reporting on the Sustainable Development Goals, the Statistics Division is organizing a conference on national reporting platforms for the reporting of the Sustainable Development Goal indicators in New York from 22 to 24 January 2018. The conference provides an important opportunity to review and discuss open

[2] Documentation is available from https://unstats.un.org/SDGAPI/swagger/.

data practices and to give guidance specifically on how to integrate open data principles in the establishment of national platforms for the Goals. It is expected to provide recommendations and guidelines for basic requirements of national data platforms suitable for Sustainable Development Goal follow-up and reporting. It is expected that the recommendations will be aligned with the open data standards and best practices, helping the countries to shape their national strategies to implement or adapt their open data portals.

E. Open data practices in international organizations

14. At the thirtieth session of the Committee for the Coordination of Statistical Activities, in September 2017, a task team was created on open data to explore common standards and procedures for improved open data and microdata dissemination. It was emphasized that the work on open data should be aligned with the Cape Town Global Action Plan. The task team will, among other things, conduct a survey among Committee members regarding their adherence to current open data practices and will prepare and submit to the Committee a document outlining the feasibility of moving towards common open data standards and, where feasible, draft relevant common standards and develop effective mechanisms for information exchanges (see E/CN.3/2018/32).

III. Data interoperability as an enabler for open data

15. Interoperability is the ability to access and process data from multiple sources without losing meaning and to then integrate those data for mapping, visualization and other forms of representation and analysis. Developing common standards is essential to realizing the benefits of data interoperability. The value of open data increases with data interoperability, ensuring that different data sets can be brought together and built upon. The underlying needs for openness, transparency, inclusion and participation are all prerequisites to interoperability.

16. The Statistics Division, together with the Global Partnership for Sustainable Development Data, has established a collaborative on Sustainable Development Goal data interoperability. The purpose of the collaborative is to bring together key experts and stakeholders and help to coordinate progress across sectors and geographical regions. The shared vision of the collaborative is a global data ecosystem in which multiple sources of sustainable development data can be easily accessed by anyone and integrated seamlessly in applications that enable improved analysis, decision-making and accountability. To move towards the realization of that vision, members of the collaborative from countries, international organizations and civil society groups have agreed to work together in the development of proposals to address data governance issues and in the design and pilot implementation of replicable prototypes of technical solutions and approaches to tackle specific interoperability challenges. The result of this work will be presented at the United Nations World Data Forum in 2018.

IV. Fundamental Principles of Official Statistics and open data

17. The Fundamental Principles of Official Statistics (see resolution 68/261), the set of professional and scientific standards governing official statistics, provide an important basis for the implementation of open data by national statistical systems.

Principle 1 affirms that "official statistics that meet the test of practical utility are to be compiled and made available on an impartial basis by official statistical agencies to honour citizens' entitlement to public information", which is one of the core values of open data. An important element of open data is the provision of adequate metadata, as provided by principle 3. The privacy of individual data is guaranteed under principle 6. Transparency in the administration of statistical systems is enshrined in principle 7.

18. At its forty-eighth session, the Commission, in its decision 48/107, requested the newly formed Friends of the Chair group to take into account in the review of the Fundamental Principles of Official Statistics the current discussions on open data, big data and quality assurance.

V. Recommendations on open data

19. The international seminar on open data for the Sustainable Development Goals held in Seoul provided important suggestions and recommendations for the implementation of open data in national statistical systems. The discussion focused on actions that can be undertaken at the national level and work that can be conducted at the global level. The recommendations at the national level are summarized below:

(a) Incorporate the principles and practices of open data in the development of national plans, including in the national strategies for the development of statistics;

(b) Address the issue of open data in statistics laws and related legal frameworks, including aspects of funding needs;

(c) Secure resources and develop the necessary skills of staff in national statistical organizations and systems;

(d) Involve all potential stakeholders to ensure that users' demands are addressed, and consider whether users should be part of the statistical system;

(e) Develop platforms for stakeholder consultations, including for defining the "value" of data and what is valuable to users;

(f) Establish partnerships with all relevant data producers to further enhance open data in the national statistical system;

(g) Develop data interoperability principles and tools, as data interoperability is an important tool to ensure that open data are usable;

(h) Promote the integration of geospatial information with data/statistical information;

(i) Develop data visualization and other data dissemination tools to make data easily understandable and accessible, as they are integral components of the process of making data open.

20. While there are many steps that need to be taken at the national level to implement open data within national statistical offices and systems, there are also actions that need to be addressed collectively and through international instruments. Based on the discussion at the international seminar in Korea, they are summarized below:

(a) There is a need to provide overall guidance for open data practices, recognizing that every country will need to develop its own path;

(b) Collectively, the international data community needs to develop support programmes and guidance for different groups of countries with different capacities and needs to assist them in implementing open data. Providing support based on the different levels of needs will allow for country-to-country support so that countries with more developed systems for open data can share their best practices;

(c) There is a need to redefine national statistical systems, recognizing the expansion of the data ecosystems and including all relevant data producers and users, with national statistical offices at the centre. The United Nations World Data Forum in 2018 provides an opportunity and space to further advance the work on open data across all data ecosystems. It will also be an opportunity to further strengthen partnerships between national statistical offices and other data producers;

(d) The core principles of open data are embodied in the Fundamental Principles of Official Statistics (principles 1, 3, 6 and 7 in particular) and could be mapped to the open data principles highlighted in the Open Data Charter. A clear acknowledgement of the alignment of the Fundamental Principles and open data principles could be helpful for the implementation of open data at the national level;

(e) Tools and governance systems for data interoperability should be developed;

(f) In order for national statistical offices to have some practical guidance in the implementation of open data practices, open data guidance and examples of best practices should be included in the updated version of the Handbook of Statistical Organization (E/CN.3/2018/5);

(g) A website for open data best practices should be established, to be hosted by the Statistics Division;

(h) Capacity development programmes and projects also provide opportunities to strengthen statistical systems. The seminar recommended promoting the inclusion of open data principles and practices in capacity development programmes and projects.

21. The seminar finally recommended that a mechanism be established within the Statistical Commission to work on principles, guidance and support for the implementation of open data in countries. The mechanism would address the following tasks:

(a) Review the principles of open data and develop recommendations for national statistical offices on the implementation of open data;

(b) Review legal frameworks for open data;

(c) Define and clarify the technical aspects and skills needed for the implementation of open data;

(d) Provide guidance on and support the implementation of open data; and

(e) Develop guidelines on the anonymization of data.

To build upon ongoing work, it is suggested that the Friends of the Chair group on the Fundamental Principles of Official Statistics, established at the forty-eighth session of the Statistical Commission, take on these additional tasks, possibly through a subgroup.

VI. Points for decision

22. **The Statistical Commission is invited to:**

(a) **Express its views on the recommendations contained in section V as a basis to carry the work forward;**

(b) **Review and express its views on the establishment of a mechanism within the Statistical Commission to work on principles, guidance and support for implementation of open data in countries, possibly as a subgroup of the Friends of the Chair on the Fundamental Principles of Official Statistics;**

(c) **Review and express its views on the proposed tasks of the subgroup on open data, as detailed in paragraph 21.**